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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/788,547	02/27/2004	John F. Corson	10031000-1	7082
22878	7590	10/19/2006	EXAMINER	
AGILENT TECHNOLOGIES INC. INTELLECTUAL PROPERTY ADMINISTRATION, M/S DU404 P.O. BOX 7599 LOVELAND, CO 80537-0599			TURK, NEIL N	
			ART UNIT	PAPER NUMBER
			1743	

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/788,547

Applicant(s)

CORSON ET AL.

Examiner

Neil Turk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 07 August 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2/27/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Remarks

This Office Action fully acknowledges applicant's remarks made on August 7th, 2006. Claims 1-17 are pending. Claims 18-28 have been withdrawn from consideration, as they are drawn to a non-elected invention.

Election/Restrictions

Applicant's election with traverse of group I in the reply filed on August 7th, 2006 is acknowledged. The traversal is on the ground(s) that examining group II would not impose a serious burden on the Examiner. This is not found persuasive because, as previously stated, groups I and II contain separate and distinct inventions, and it would therefore require a serious burden on the Examiner to search both inventions.

The requirement is still deemed proper and is therefore made FINAL.

Claims 18-28 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on August 7th, 2006.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 recites the limitation "any" in line 5 of claim 1. There is insufficient antecedent basis for this limitation in the claim. "Any" should be replaced with "said".

Claims 9 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear how the kit is related to the biopolymer array. Examiner suggests that applicant add a further limitation to claim 1, such as "providing an array", and claim 9 should then include a limitation such as "providing a kit comprising said biopolymer array"; in this way the kit and the biopolymer array are definitely recited and related to each other.

Claims 13 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear what steps are involved in performing the methods as stated in claims 13 and 15. The methods recited in claims 13 and 15 should each be recited as a further step to the method of independent claim 1. Additionally, claim 13 recites the limitation, "...results of reading obtained..." the word said should be added between "of" and "reading". Claim 15 should also recite "said" between "a" and "reading"

Claims 16 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap

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between the elements. See MPEP § 2172.01. The omitted elements are: claims 16 and 17 recite an optical reader system, but do not recite any structural limitations to the optical reader system.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 6, 7, 10, 13, and 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Lewis (2001/0041366).

Lewis discloses methods for detecting the presence of an analyte. Lewis discloses a sample chamber having a fluid inlet port for the influx of the analyte, a fluid concentrator in flow communication with the sample chamber, the fluid concentrator having an absorbent material capable of absorbing the analyte and capable of desorbing a concentrated analyte, and an array of sensors in fluid communication with the concentrated analyte (paragraphs 0031-0033). Lewis also discloses that the device further comprises a detector associated with each sensor that provides a response in the presence of an analyte (paragraph 0034). Lewis shows in figure 2 an embodiment of the breath collector and concentrator (BCC) with a breath inlet port 24 and breath exhaust port 25 (paragraph 0038). Lewis further discloses a fluid concentrator (filter) 23 that is in flow communication with the breath exhaust, and the breath is circulated

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through the chamber using a fan 21. Lewis also discloses that the sensor array is in flow communication with the desorbed analyte. Lewis discloses that the sorbent material is chosen for the purpose of sorbing gases, vapors, and the like, and sorbent materials include activated carbon (filters ozone), silica gel, activated alumina, molecular sieve carbon, silicalite, a polymer, co-polymer, alumina and those others as listed in paragraph 0044. Lewis further discloses that after some time period for sorbing the desired analytes from the vapor phase onto the material, the circulation is stopped and then the material is desorbed from the sorbent phase and released into the sensor chamber, and the desorbing of the concentrated analyte may be accomplished by thermal means or mechanical means, such as heating, purging, or pressuring (paragraph 0046). Lewis discloses that the array of sensors present in fluid communication with the concentrated analyte include such sensors as dye-impregnated polymer films on fiber optic detectors, infrared sensors, chemically sensitive field-effect transistors, chemiresistors, among others as listed in paragraph 0050. Examiner asserts that the sensor arrays of dye-impregnated polymer films on fiber optic detectors in conjunction with biological fluids assayed within the sensor arrays constitute a biopolymer array. Lewis further discloses that the temporal response of each sensor is recorded and can be displayed; the various responses include optical responses (paragraph 0052, 0053). Lewis also discloses that the systems comprises sensor arrays, a measuring device for detecting responses across each sensor, a computer, a display, a data structure of sensor array response profiles, and a comparison algorithm (paragraph 0052). Examiner asserts that the disclosure to recording and displaying a

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temporal response in combination with a measuring device, a computer, a display, and data structure meets the limitations of claims 13 and 15. Lewis discloses that the method and apparatus have several medical applications including sampling and detecting of biological gases/fluids within the sensor arrays (paragraphs 0054-0077).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2, 3, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis in view of Sunshine (6,085,576).

Lewis has been discussed above.

Lewis does not specifically disclose loading a plurality of arrays of the same layout in a holder.

Sunshine discloses a handheld vapor sensing apparatus that includes an embodiment that incorporates four plug-in sensor array devices 720, all mounted vertically in pairs on board 730 and covered by cover 732. Sunshine also discloses that each sensor array includes eight chemically sensitive sensors 740, each providing a particular characteristic response when exposed to a test sample carrying samples to be analyzed (lines 9-45, col. 9, fig. 7A-C).

It would have been obvious to modify the Lewis device to include a plurality of arrays of the same layout in a holder such as taught by Sunshine in order to provide an arrangement of sensor arrays capable of providing multiple characteristic responses to more thoroughly sense for analytes of interest in the test sample.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis.

Lewis has been discussed above.

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Lewis does not specifically disclose that the airflow within the reader is provided under negative pressure.

Lewis discloses that the desorbing step may be accomplished through pressuring.

It would have been obvious to modify the desorbing step or Lewis to be conducted under negative pressure such that applying a negative pressure is a well known equivalent to a positive pressure, wherein both provide a pressure differential for fluid flow, so as to push the desorbed analytes through to the sensor arrays.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis in view of Sunshine.

Lewis and Sunshine have been discussed above.

Lewis does not disclose a biopolymer from the group consisting of polypeptides and nucleic acids.

Sunshine discloses a vapor sensing apparatus with a sensor array capable of detecting nucleic acids, and many biomolecules such as amino acids, are amenable to detection (lines 19-27, col. 24).

It would have been obvious to modify the Lewis device to include nucleic acids as a biopolymer such as taught by Sunshine in order to provide the Lewis device with additional fluid analysis capabilities.

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Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis in view of Matzinger (7,118,916). Lewis has been discussed above.

Lewis does not specifically disclose a kit with a biopolymer array and reagents and instructions.

Matzinger discloses kits that are provided for use in practicing the methods disclosed in Matzinger. Matzinger discloses that the kits may comprise test strips or other sample holders containing an analyte or analytes, and a sample reader or meter for reading the test strips, and the kits further comprise instructions (lines 50-62, col. 14).

It would have been obvious to modify the Lewis device to include a kit such as taught by Matzinger in order to make the Lewis device "ready-to-use" or, in other words, to provide means for practicing the methods of the Lewis device by a user.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis in view of Scott (6,266,995).

Lewis has been discussed above.

Lewis does not specifically disclose transmitting results of a reading to a remote location.

Scott discloses a portable medical gas system in which data files or reports can be transmitted from a computer to a remote computer or network, or data or reports can be transmitted via telephone from the computer for printout on a remote fax machine.

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Scott also discloses that thus, at the end of a session, project, workday or other period, information can be downloaded to a host computer (lines 16-27, col. 5).

It would have been obvious to modify the Lewis device to transmit data to a remote location such as taught by Scott in order to provide for transmitting data to other locations for viewing and/or analyzing by other individuals or computers.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure as information related to applicant's field of endeavor.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neil Turk whose telephone number is 571-272-8914. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NT


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